Amendments to the Claims:

1. (Canceled)

2. (Currently Amended) A microelectromechanical (MEMS) structure on a substrate, comprising:

a platform connected with a set of one or more bimorph flexures; and

the set of bimorph flexures connecting the platform with the substrate, each bimorph flexure comprising a first layer comprised of a first material and a second layer comprised of a second material being different than the first material, the first and second materials having substantially similar coefficients of thermal expansion (CTEs).

3. (Previously Presented) The MEMS structure of claim 2, wherein the first and second materials have substantially different intrinsic residual stress (IRS) characteristics.

4. (Previously Presented) The MEMS structure of claim 3, wherein each bimorph flexure has a curvature, the curvature resulting substantially from the difference in IRS characteristics of the first and second materials and not resulting substantially from the difference in the CTEs of the first and second materials.

5. (Previously Presented) The MEMS structure of claim 3, wherein each bimorph flexure has a curvature that is not substantially sensitive to changes in temperature.

6. (Previously Presented) The MEMS structure of claim 3, wherein each bimorph flexure has a curvature that is the sum of a first component proportional to the IRS in the bimorph

flexure and a second component proportional to the CTE mismatches in the bimorph flexure, the first component being larger than the second component by a factor of approximately one thousand or more.

7. (Previously Presented) The MEMS structure of claim 6, wherein the first component is larger than the second component by a factor of approximately one thousand or more at normal operating temperatures of the MEMS structure.

8. (Previously Presented) The MEMS structure of claim 3, wherein the first material comprises silicon and the second material comprises silicon nitride, or the first material comprises polysilicon and the second material comprises ceramic, SiC, or silicon nitride (SixNy).

9. (Canceled)

10. (Canceled)

11. (Currently Amended) The MEMS structure of claim <u>1</u> ~~10~~, wherein the second layer extends over a portion of the first layer that is less than the entire length of the first layer<u>, the second layer being affixed to the first layer along the entire length of the second layer.</u>

12. (Previously Presented) The MEMS structure of claim 11, wherein the second layer provides a residual stress difference between the top and bottom portions of the first layer.

13. (Previously Presented) The MEMS structure of claim 3, wherein:

each bimorph flexure has a curvature that elevates the platform above the substrate; and the platform is an actuator segment or mirror segment.

14. (Currently Amended) A method for fabricating a microelectromechanical (MEMS) structure, the method comprising:

forming a platform connected with a set of one or more bimorph flexures; and

for each bimorph flexure in the set of bimorph flexures:

forming a first layer ~~of the bimorph flexure, the first layer comprising~~ comprised of a first material; and

forming a second layer ~~of the bimorph flexure, the second layer comprising~~ comprised of a second material that is different than the first material, the first and second materials having substantially similar coefficients of thermal expansion (CTEs).

15. (Previously Presented) The method of claim 14, wherein the first and second materials have substantially different intrinsic residual stress (IRS) characteristics.

16. (Previously Presented) The method of claim 15, wherein each formed bimorph flexure has a curvature, the curvature resulting substantially from the difference in IRS characteristics of the first and second materials and not resulting substantially from the difference in the CTEs of the first and second materials.

17. (Previously Presented) The method of claim 15, wherein the first material comprises silicon and the second material comprises silicon nitride, or the first material comprises polysilicon and the second material comprises ceramic, SiC, or silicon nitride (SixNy).

18. (Previously Presented) The method of claim 15, wherein forming the second layer comprises forming the second layer external to the first layer.

19. (Currently Amended) The method of claim 15, wherein forming the second layer comprises forming the second layer to extend over a portion of the first layer that is less than the entire length of the first layer and forming the second layer to be affixed to the first layer along the entire length of the second layer.

20. (Previously Presented) The method of claim 15, wherein the first and second layers are formed under conditions that produce substantially different intrinsic residual stress (IRS) characteristics in the first and second materials.

21. (Previously Presented) The method of claim 20, wherein:

forming the first layer comprises tuning the residual stress of the first layer; and

forming the second layer comprises forming the second layer under a specific ratio of the reactant gasses, deposition pressure, and deposition temperature to produce a desired residual stress of the second layer.

22. (New) A microelectromechanical (MEMS) structure on a substrate, comprising:

a platform connected with a set of one or more bimorph flexures; and

the set of bimorph flexures connecting the platform with the substrate, each bimorph flexure comprising a first layer comprised of a first material and a second layer comprised of a second material having substantially similar coefficients of thermal expansion (CTEs), wherein

the first material comprises polysilicon deposited under a first set of conditions and the second material comprises polysilicon deposited under a second set of conditions, wherein the first and second set of conditions are different so as to induce different IRS characteristics in the first and second materials.

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